

A REVISION OF THE SHORE-FLY GENUS *CLASIOPELLA* HENDEL
(DIPTERA: EPHYDRIDAE)

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Abstract.—The shore-fly genus *Clasiopella* Hendel is revised. *Clasiopella*, now placed in the tribe Discomyzini (subfamily Discomyzinae), had been monotypic, with *C. uncinata* Hendel as its only included species. Herein, *C. austra* is described (Australia, NSW: Careel Bay, Avalon (mangrove)), and the placement of *Clasiopella* in the classification of Ephydriidae is briefly discussed.

Key Words: Diptera, Ephydriidae, shore flies, *Clasiopella*, phylogeny

The classifications of most major groups of organisms commonly include monotypic genera. The Ephydriidae, or shore flies, are no exception, with 20 of 115 genera each represented by a single species (the number may vary depending on the author). Certainly some species are strikingly different, with a marked discontinuity between them and other species. Too frequently, however, this discontinuity, sometimes referred to as "gap" (Michener 1970), has been the primary or only basis for establishing monotypic genera for these species. From the standpoint of a phylogenetic classification, however, the issue is not simply a matter of being different, a phenetic approach. Equal, if not more important, are the phylogenetic relationships the so-called genus has with other taxa, even if that information is known on only a rudimentary level. If recognition of a species as a monotypic genus makes another genus-level group paraphyletic, the former should not be recognized.

The monotypic status of a genus also changes with discovery of additional species, although this process alone does not resolve the issue of their phylogenetic relationships. The description of a new spe-

cies in a hitherto monotypic genus, coupled with presentation of rudimentary information on the phylogenetic relationships, are the primary purposes of this paper, which concerns the shore-fly genus *Clasiopella* Hendel. Until now, the only included species was its type species, *C. uncinata* Hendel (1914). Earlier, however, other species had been described in, or transferred to, *Clasiopella* that have since been shifted to other genera. Cresson (1925) transferred *Ephygrobia nervimaculata* Becker (1910) to *Clasiopella* because of its similarity with *Psilopa dimidiata* Cresson (= *P. girschneri* von Röder (1889)), a species that he also placed in *Clasiopella* (Cresson 1925) but which is now in the genus *Psilopa* Fallén (Wirth 1965, 1968). In the Afrotropical catalog of Diptera, however, Cogan (1980) continued to list *E. nervimaculata* under *Clasiopella*. In a forthcoming world catalog of shore flies (Mathis and Zatwarnicki, in preparation), the latter species will be listed under *Psilopa*, following the precedent of Becker (1926). Cresson (1939) described *Clasiopella metatarsata* from specimens collected in Panama. Later, he (1941) transferred that species to *Mimapsilopa* Cresson as its

type species, then to *Psilopa* (1944), and finally to *Helaeomyia* Cresson (1946a) with synonymy of *Mimapsilopa* under the latter genus. Lizarralde de Grosso (1982) resurrected *Mimapsilopa* as a valid genus with *C. metatarsata* as its type species. Lastly, Frey (1958) named *Clasiopella afra* from specimens collected on the Cape Verde Islands. Tsacas (1980) subsequently transferred this species to the genus *Drosophila* Fallén (Drosophilidae). Thus, until now *Clasiopella* has been monotypic. In addition to the new species that is described herein, the placement of the genus within the classification of the Ephydriidae will be briefly discussed.

Methods.—The descriptive terminology, with the exceptions noted in Mathis (1986), follows McAlpine (1981). Descriptions are composite, not based solely on primary types. Two venational ratios are used commonly in the descriptions and are defined here (all ratios are averages of three specimens):

1. Costal Vein Ratio: the straight line distance between the apices of R_{2+3} and R_{4+5} /distance between the apices of R_1 and R_{2+3} .
2. M Vein Ratio: the straight line distance along M between crossvein dm-cu and r-m/distance apicad of crossvein dm-cu.

Although most specimens for this study are in the National Museum of Natural History (USNM), the type series of the new species is from the Australian Museum (AM), Sydney, Australia (Dr. David K. McAlpine) and Australian National Insect Collection (ANIC), Canberra, Australia (Dr. Peter S. Cranston). Additional specimens were borrowed and studied from the Academy of Natural Sciences of Philadelphia (ANSP), Pennsylvania (Dr. Jon K. Gelhaus and Mr. Don Azuma); Hungarian Natural History Museum (HNHM), Budapest, Hungary (Dr. L. Papp); Zoological Institute (ZIL), Lund University, Lund, Sweden (Dr. Roy Danielsson); and Deutsches Entomo-

logisches Institut (DEI), Eberswalde, Germany (Dr. Joachim Ziegler).

SYSTEMATICS

A few preliminary remarks are in order to give perspective to this study, including comments on the placement of *Clasiopella* within the classification of the Ephydriidae. This genus was recently placed in the tribe Discomyzini, subfamily Discomyzinae (Zatwarnicki 1992). Zatwarnicki characterized Discomyzini by the presence of dorsal setulae, usually three or four, on vein R_{2+3} basad of crossvein r-m. I first suggested this character (Mathis 1985) as a synapomorphy that grouped *Actocetor* Becker, *Trypetomima* de Meijere, and *Eremomusca* Mathis. This character is now known to characterize genera of the tribe Discomyzini (Zatwarnicki 1992, who interprets the absence of these setulae in *Guttipsilopa* Wirth and *Rhysophora* Cresson, two genera that are included in Discomyzini, to be a secondary loss). Within Discomyzini, *Clasiopella* is apparently related to *Actocetor* and *Trypetomima*, especially the latter. These three genera are characterized by the following synapomorphies: (1) pseudopostocellar setae well developed (setae sometimes inserted within the ocellar triangle but usually behind) and with a divergent and slightly reclinate orientation; (2) fore femur with 2–4 long, widely spaced, posteriorly directed setae along the posteroventral margin and 2 smaller, apically curved setae that are inserted just before the apex; (3) alula reduced, very narrowly developed as a linear band; (4) posterior margin of male fifth tergite and sometimes the fourth tergite and the dorsal margin of epandrium bearing several, conspicuously longer setae.

Zatwarnicki (personal communication) is now studying the phylogenetic relationships among the lineages that comprise Discomyzini and Psilopini, and here, I only list and annotate the characters that I have used to distinguish *Clasiopella* from *Actocetor* and *Trypetomima*. *Clasiopella* differs from the

latter two genera by the (1) lack of a well-developed supra-alar seta (This seta is present and well developed in *Actocetor*, but is lacking in *Trypetomima*. The absence is apparently a secondary loss in *Clasiopella* and *Trypetomima* and is a synapomorphy for these two genera.); (2) wing uniformly and lightly infuscate, mostly hyaline (The wing is variously patterned in *Actocetor* and *Trypetomima*.); (3) posterior margin of anepisternum bearing two larger setae, with the ventral seta conspicuously longer, more than twice the length of the dorsal seta (The ventral seta in *Actocetor* and *Trypetomima* is slightly less than twice the length of dorsal seta.); (4) vein R_{2+3} comparatively short, with a costal vein ratio of 0.80 to 0.90 (This vein is longer in *Actocetor*, and in *Trypetomima*, where the vein is also short, there is a stump vein, which is apparently a synapomorphy for the latter.); (5) scutellum as long or longer than wide, bearing few setulae on disc (In *Actocetor* and *Trypetomima*, the scutellum is wider than long, and the disc, in *Actocetor*, bears numerous setulae.); (6) facial setae 2, dorsal pair cruciate, inserted below midheight of face near the narrowest point of the face and parafacials (There are 4–5 large facial setae in *Actocetor*, with the dorsalmost seta being inserted above the midheight level. *Trypetomima*, like *Clasiopella*, has two facial setae).

Genus *Clasiopella* Hendel

Clasiopella Hendel, 1914: 109. Type species: *Clasiopella uncinata* Hendel, 1914, original designation.—Cresson, 1945: 68 [review of Indoaustralian area], 75 [key]; 1946a: 152 [review, a suspected introduction to the New World]; 1946b: 256 [review, probable introduction to Africa (Kenya)].—Wirth, 1965: 742 [Nearctic catalog]; 1968: 11 [Neotropical catalog].—Cogan and Wirth, 1977: 329 [Oriental catalog].—Cogan, 1980: 659 [Afrotropical catalog].—Tenorio, 1980: 284–286 [revision].—Mathis, 1989: 643 [Australasian/Oceanian catalog].

Diagnosis.—Small to moderately small shore flies, length 1.40 to 2.40 mm; microtomentum generally sparse or absent, appearing subshiny to shiny; species mostly black; setation well developed.

Head: Normally developed, not triangular or with bulging eyes; antenna in profile inserted at dorsal $\frac{1}{3}$; frons conspicuously wider than long; intrafrontal setae absent; fronto-orbital setae 2, both well developed, reclinate seta longer, inserted mediad and slightly in front of outer, proclinate seta; ocellar setae well developed, inserted behind level of anterior ocellus, orientation usually parallel, sometimes convergent, rarely cruciate; pseudopostocellar setae well developed, length about $\frac{1}{2}$ that of ocellar setae, orientation divergent at usually less than 90° ; both inner and outer vertical setae present, well developed, outer seta about $\frac{2}{3}$ length of inner seta; posterior margin of vertex angulate, not rounded; posterior ocelli situated immediately before vertex. Antenna with flagellomere 1 longer than pedicel; scape not exerted, bearing a well-developed seta at dorsoapical corner; arista pectinate, bearing 8–10 dorsal rays. Eye irregularly elliptical, higher than wide, with few, inconspicuous interfacetal setulae, appearing bare. Face mostly smooth, without pits or rugosity, color of microtomentum variable, with median, shallow hump near midheight and slightly dorsad; 2 strong facial setae, orientation inclinate, dorsal seta cruciate, inserted just below midfacial height; proboscis normally developed, not elongate.

Thorax: Generally black to deep bluish black, microtomentum mostly thin to mostly lacking; postpronotum with white microtomentum; scutellum relatively long, width only slightly greater than length. Chaetotaxy as follows: mesonotal setulae in regular rows, rows ended near level of prescutellar acrostichal seta; prescutellar acrostichal seta well developed, inserted far anteriorly, slightly anteriorly of level of single, large, dorsocentral seta, distance between dorsocentral setae more than that between apical scutellar se-

tae: presutural seta 1, well developed; supraalar seta absent; postalar seta 1, slightly shorter than presutural seta; scutellar disc sparsely setulose; basal scutellar seta over 1/2 length of apical seta; notopleuron lacking setulae; anterior and posterior notopleural setae equidistant from notopleural suture; anepisternum with 2 large setae at posterior margin, ventral seta about 3 × length of dorsal seta; katepisternum with 2 large setae, anterior seta smaller. Halter white to yellowish. Wing mostly hyaline but lightly infuscate, appearing smoky, largely unicolorous (wings of some specimens faintly darker toward anterior margin), apical portion of wing narrowly rounded, with wing length-to-width ratio averaging 0.4 (length measured from base of cell bm to apex); vein R₂₊₃ extended normally to costal margin, well separated from costa, lacking a stump vein, relatively short, making 3rd section (between veins R₂₊₃ and R₄₊₅) long compared to 2nd section (between veins R₁ and R₂₊₃); R stem vein bearing 2–4 setulae dorsally; crossvein dm-cu straight. Legs with fore basitarsus slender, concolorous with remaining tarsomeres; fore femur with row of 2–4 long setae along posteroventral margin, longest seta (most apical) much longer than width of fore femur, also bearing 2 smaller, apically curved setae along posteroventral surface near apex.

Abdomen: Mostly shiny, blackish, microtomentum generally sparse; 5th tergite of male shinier than preceding tergites, almost devoid of microtomentum, anterior margin with broad, shallow emargination dorsomedially, bearing longer setae along posterior margin; 5th sternite divided into 2 narrow, elliptical sternites at anterior margin of hypandrium, bearing setae laterally. Male genitalia symmetrical; epandrium frequently flexed upward and outward, exposing ventral margin and surstyli; epandrium enlarged, especially a well-sclerotized area dorsad of cercal cavity, bearing several well-developed setae along dorsal margin; dorsal margin of epandrium in posterior view nar-

rowly rounded, anteroventral margin drawn out into a narrow process that curves slightly medially; surstylus bifurcate externally with a dorsal and ventral process, both oriented medially; aedeagus with apex curved forward at about 90°; hypandrium broadly bowl shaped, less sclerotized than epandrium, basal portion near attachment with remainder of genital complex narrower than overall width.

KEY TO SPECIES OF
CLASIOPELLA HENDEL

- 1. Face, especially toward ventral margin, more whitish gray microtomentose than frons; legs yellow, except apical 1–2 tarsomeres *C. uncinata* Hendel
- Face and frons uniformly with gray to brownish gray microtomentum; legs blackish brown, except basal tarsomeres yellow (Australia) *C. austra*, new species

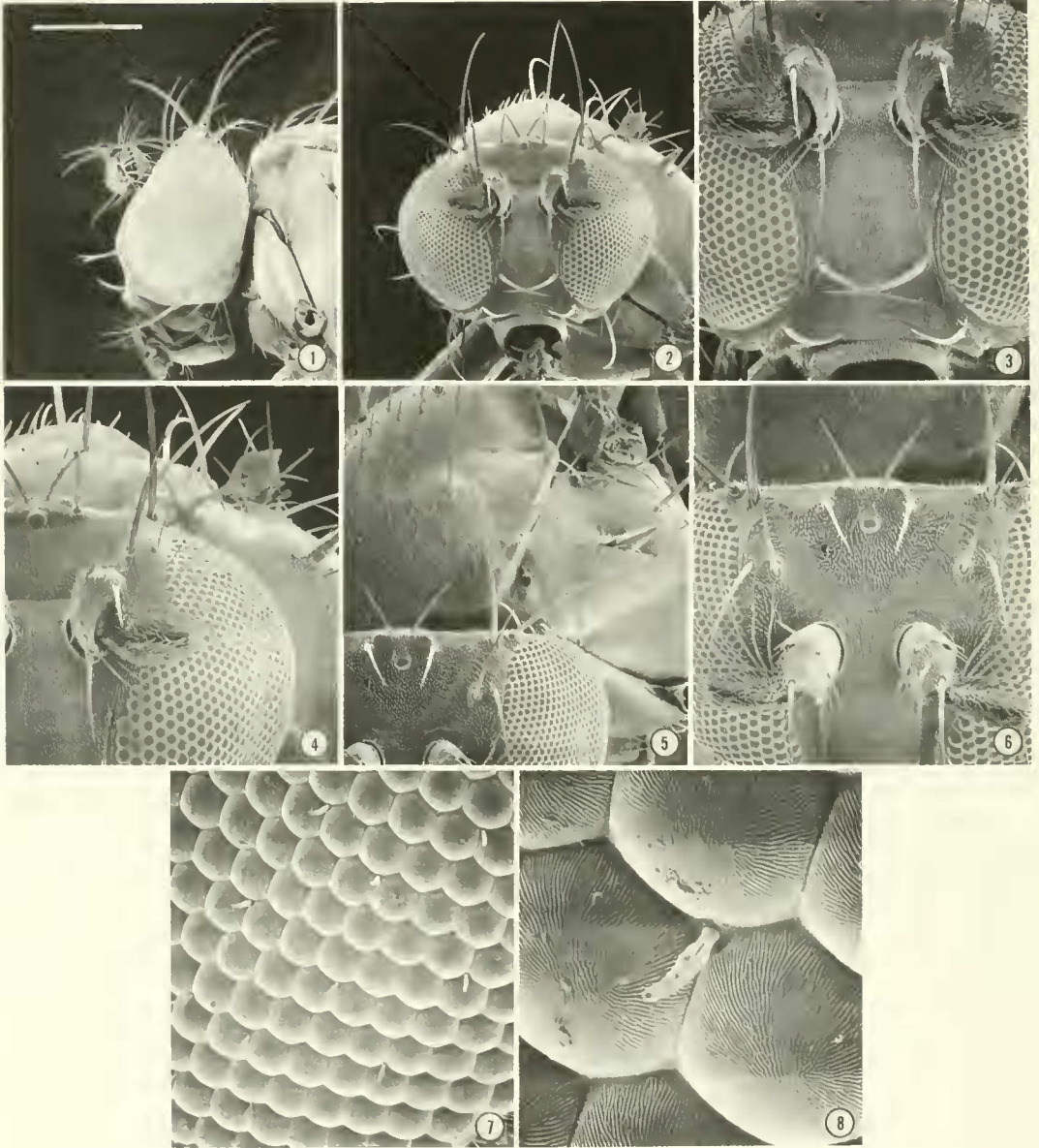
Clasiopella uncinata Hendel
Figs. 1–20

Clasiopella uncinata Hendel, 1914: 110.—Cresson, 1945: 68 [review, distribution data for Indoaustralian area]; 1946a: 152 [review, probable introduction to Caribbean and Florida]; 1946b: 256 [review, distribution data from Kenya, probable introduction], 263 [key].—Hardy, 1952: 466 [list].—Adachi, 1952: 353 [list].—Wirth, 1965: 742 [Nearctic catalog]; 1968: 11 [Neotropical catalog]; Cogan and Wirth, 1977: 329 [Oriental catalog].—Cogan, 1980: 659 [Afrotropical catalog].—Tenorio, 1980: 285–286 [revision, figures of ♂ terminalia and ♀ ventral receptacle].—Mathis, 1989: 643 [Australasian/Oceanian catalog].

Psilopa giloipes Becker, 1924: 91.—Hennig, 1941: 159 [synonymy].

Description.—Small to moderately small shore flies, length 1.4 to 2.2 mm; mostly dark colored except for legs and wings.

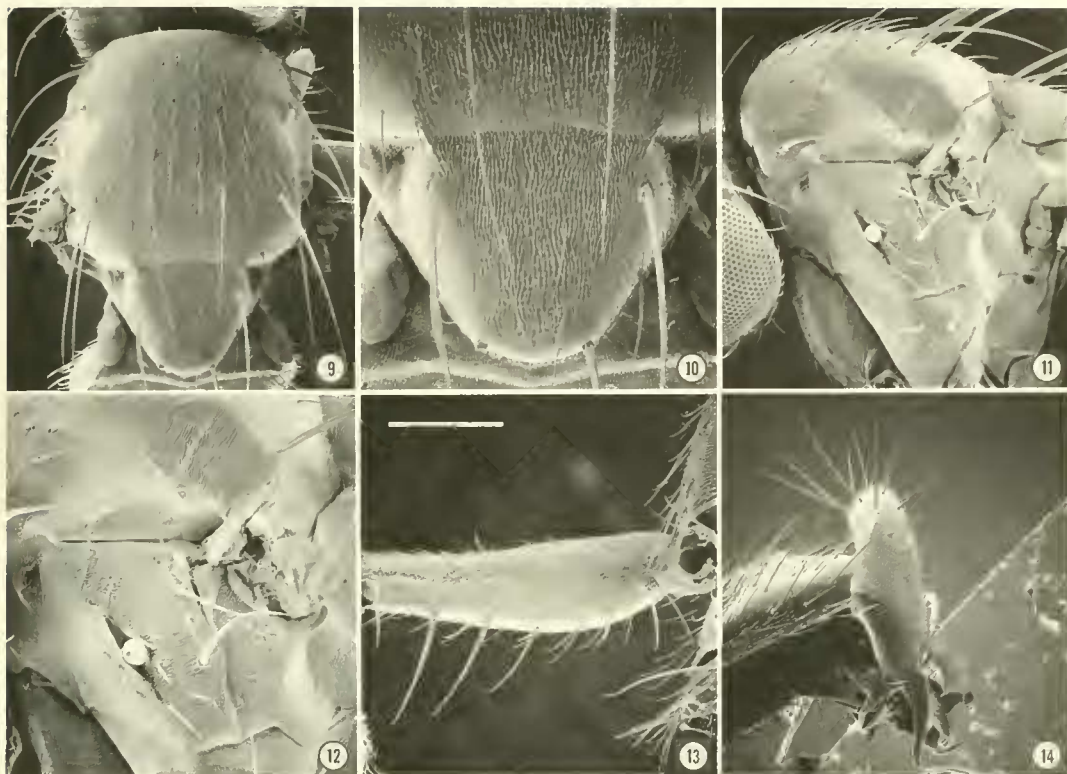
Head (Figs. 1–8): Frons (Fig. 6) with width about twice height, black, subshiny (especially mesofrons), with thin gray microtomentum, especially anteriorly and on



Figs. 1–8. Scanning electron micrographs of *Clasiopella uncinata* (scale length in parenthesis; bar scale for all photographs = Fig. 1). 1. Head, lateral view (0.27 mm). 2. Same, anterior view (0.27 mm). 3. Face, anterior view (136 μ m). 4. Left antenna, anterodorsal view (136 μ m). 5. Vertical setae, anterodorsal view (176 μ m). 6. Frons, anterodorsal view (136 μ m). 7. Eye and interfacetal setulae, lateral view (30 μ m). 8. Same, enlargement of an interfacetal setula, lateral view (6 μ m).

parafrons; ocelli arranged in equilateral triangle, with distance between posterior ocelli much greater than between either posterior ocellus and anterior ocellus; ocellar setae

well developed, proclinate, mostly parallel. Antenna brownish black, some specimens paler toward base of flagellomere 1; arista (Fig. 4) with 9–11 dorsal rays. Face in lateral



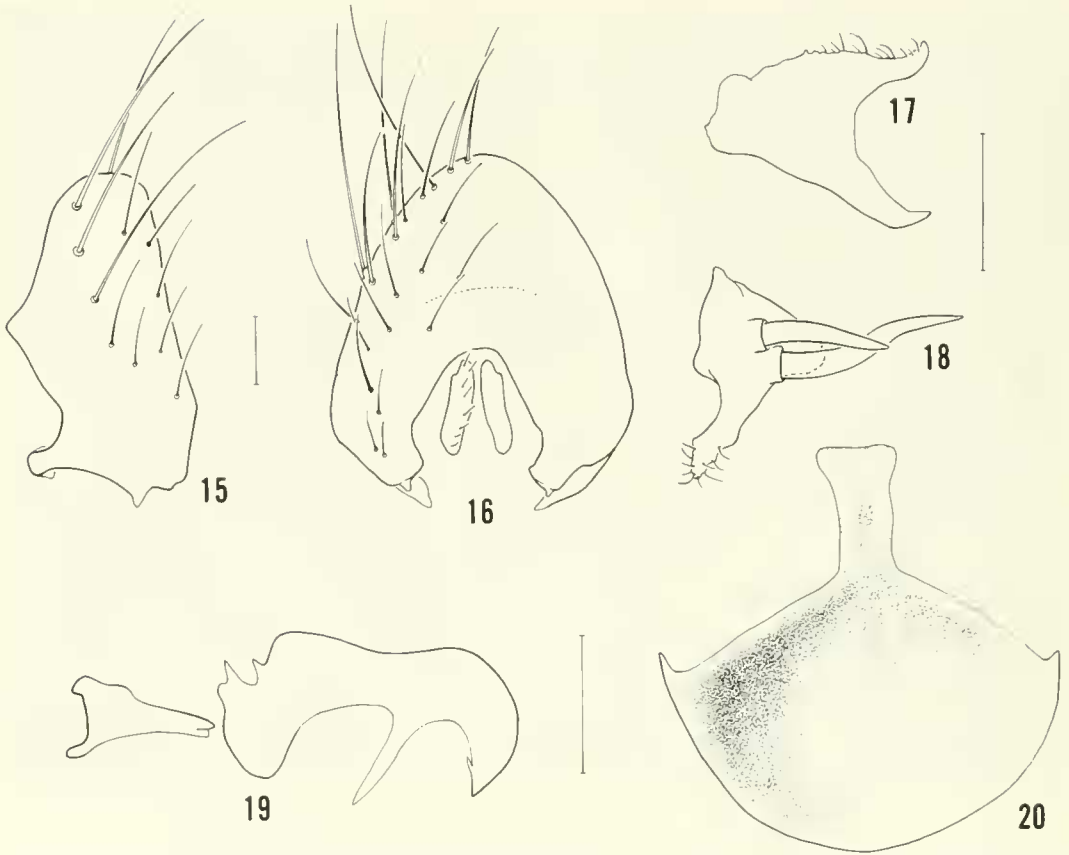
Figs. 9–14. Scanning electron micrographs of *Clasiopella uncinata* (scale length in parenthesis; bar scale for all photographs = Fig. 13). 9, Mesonotum, dorsal view (250 μm). 10, Scutellum, dorsal view (120 μm). 11, Thorax, lateral view (231 μm). 12, Notopleuron and anepisternum, lateral view (150 μm). 13, Left fore femur, posterior view (136 μm). 14, Male genitalia, lateral view (200 μm).

view generally arched forward, short portion near midheight and slightly ventrad more protrudent and broadly carinate (best seen in profile), black, thinly (dorsal $\frac{2}{3}$) to densely (ventral $\frac{1}{3}$) invested with white microtomentum; bearing 2 larger facial setae, both inclinate, and a smaller setula postero-ventrad. Eye height-to-width ratio 0.75. Gena very short, eye-to-cheek ratio 0.10, concolorous with ventral portion of face; genal seta well developed, length subequal to inner vertical seta. Clypeus black with whitish microtomentum. Palpus black.

Thorax (Figs. 9–13): Generally brownish black to black; mesonotum (Fig. 9) subshiny, moderately invested with brown microtomentum, microtomentum extended laterally to dorsal angle of notopleuron;

postpronotum, notopleuron, and pleural region with whitish gray microtomentum, denser on postpronotum and katepisternum. Legs mostly yellow; fore coxa whitish yellow; apical tarsomeres brown; fore femur (Fig. 13) with 2–3 long setae along postero-ventral margin, longer setae greater than width of femur. Wing hyaline, faintly infusate, generally brownish; vein R_{2+3} relatively short, costal vein ratio averaging 0.85; M vein ratio averaging 0.5.

Abdomen: Male genitalia (Figs. 14–20): epandrial process (Fig. 15) extended from anteroventral angle, comparatively long, curved ventrally; dorsal process of surstylus (Fig. 17) in lateral view not much more broadly developed than ventral process, apex of dorsal process rounded with tooth-



Figs. 15–20. Structures of the male genitalia of *Clasiopella uncinata*. 15, Epandrium, lateral view. 16, Epandrium and cerci, posterior view. 17, Surstylus, lateral view. 18, Clasper, lateral view. 19, Aedeagus and aedeagal apodeme, lateral view. 20, Hypandrium, ventral view. Scale bar equals 0.1 mm.

like medioapical process, median surface of dorsal process irregular, with 2 pointed bumps; ventral surstylar process shallowly sinuous, gradually tapered to acutely pointed apex; aedeagus (Fig. 19) in lateral view curved forward at apical $\frac{1}{3}$, apex acutely pointed, bearing subapical, lateral, narrow, prong-like process with orientation similar to that of apical $\frac{1}{3}$ of aedeagus, basal portion of aedeagus with rounded lobe laterally; aedeagal apodeme (Fig. 19) narrowly triangular in lateral view; clasper (Fig. 18) very distinctive, with a rounded median lobe, ventral process, and 2 greatly enlarged setae; ventral process of clasper in lateral view almost straight but with irregular margins,

bearing setulae apically and subapically; 2 greatly enlarged setae of clasper inserted laterad of median lobe, dorsal seta smaller, nearly straight, ventral seta sinuous; gonite more or less triangular in dorsal view, with a short, median lobe bearing 2 apical setulae; basal portion of hypandrium (Fig. 20) very narrow, width less than that of aedeagus.

Type material.—The lectotype female, designated herein, of *Clasiopella uncinata* is labeled "Anping[,], Formosa[.] H. Sauter, VI. 1912/Hendel det./Syntypus [red]/TYPUS [maroon]/DEI EBERSWALDE." [Taiwan, Anping; ST ♂, DEI]/LECTOTYPE ♀ *Clasiopella uncinata* Hendel by

W.N.Mathis, 1994 [gender, species name, designator, and year handwritten; black submarginal border]. The lectotype is double mounted (minuten in a thin, rectangular block of plastic foam), is in good condition (apices of wings torn and missing), and is deposited in DEI. A paralectotype female (DEI) bears the same locality label data as the lectotype.

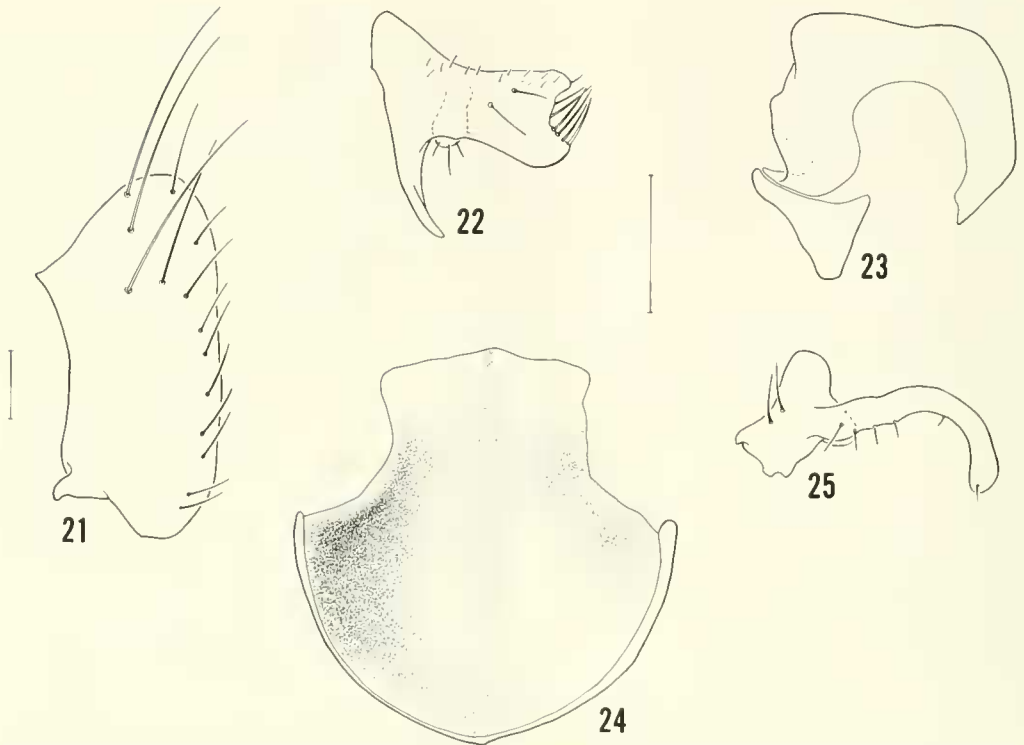
The holotype male, not a female as stated in the original description, of *Psilopa gilvipes* is labeled "Anping[,] Formosa X [Oct; handwritten] H.Sauter. V. [the Roman numeral "V," for the month of May, has a line through it, which I presume cancels it with the handwritten "X," or Oct, as the substitution] 1912/Becker det./gilvipes Beck. [sic!; should be gilvipes; handwritten]/Holotypus [red]/TYPUS [maroon]." The holotype is double mounted (minuten in a thin, rectangular block of plastic foam), is in good condition (some setae are missing and/or have their orientation altered; the specimen is slightly teneral), and is deposited in DEI.

Other specimens examined.—Afrotropical: *MADAGASCAR*. Nosy Be, Beach Ambatoloaka, 4–7 Apr 1991, A. Freidberg, F. Kaplan (2♂, 2♀; USNM); Nosy Be (forest SE Lakobe Res.), 5 Apr 1991, A. Freidberg, F. Kaplan (1♀; USNM). Australasian/Oceanian: *AUSTRALIA*. Queensland: Thursday Island, Torres Strait, 19 Aug 1949, M. Mackerras (3♂, 6♀; ANIC). *HAWAII*. Hawaii: Opaepa Pond, North Kona (Makalawera and Makalapua), 12 Feb 1970, D. E. Hardy (1♂, 1♀; USNM). Oahu: Kailua (at window near beach), 1 Jun 1946, W. W. Wirth (3♀; USNM); Honolulu, C. R. Joyce, Swezey (2♀; USNM). *COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS*. Saipan (ex. latrine), 3 Sep 1944 (1♂; USNM). Neotropica: *BELIZE*. Stann Creek District: Carrie Bow Cay, 18–22 Mar–31 May 1985, 1988, W. N. Mathis (2♂, 3♀); Dangriga (12 km N), 28 Mar 1988, W. N. Mathis (1♂, 1♀; USNM); Man of War Cay, 24 Jun–8–15 Nov 1987, 1989, 1990, C. Feller, W. N. & D. Mathis, H. B. Williams

(30♂, 29♀); Twin Cays (dock area, east shore of East Island), 18 Jan 1987, W. N. Mathis, C. Feller (4♂, 3♀); Wee Wee Cay, 24 Jan 1987, W. N. Mathis, C. Feller (1♀). *MEXICO*. Tabasco: Paraiso (5 km E), 6 May 1985, A. Freidberg, W. N. Mathis (2♂, 1♀; USNM). West Indies. *DOMINICA*. Grande Savane (pond margin), 20 Mar 1965, W. W. Wirth (2♀; USNM). *JAMAICA*. Falmouth (bay shore), 1 Mar 1969, W. W. Wirth (1♀; USNM); Milk River Bath, 11 Mar 1970, T. Farr, W. W. Wirth (5♂, 2♀; USNM). *TOBAGO*. St. John: Charlotteville (5 km S, 11°19'N, 60°34'W). Hermitage River and beach, 11 Jun 1993, W. N. Mathis (4♀; USNM); Speyside (11°18'N, 60°32'W), mouth of Doctor River, 13–15 Jun 1993, W. N. Mathis (1♂, 2♀; USNM). St. Paul: Delaford, Kings Bay (11°16'N, 60°33'W), 13 Jun 1993, W. N. Mathis (1♀; USNM). Oriental. *SRI LANKA*. Northern Province: Nay Aru at Pallamandu (10 mi E Mannar), 12 Feb 1962, H. Andersson, P. Brinck, L. Cederholm (1♂; ZIL). *TAIWAN*. Anping, Apr–May 1912, Sauter (1♂, 1♀; ANSP). *VIETNAM*. Horng-Gai, 5 Sep 1963, Pócs (1♂; HNHM).

Quarantine interceptions from planes.—*GUAM*. [various dates (1938 and 1939) and several planes from many islands and coastal sites within the Pacific Ocean area], R. G. Oakley (8♂, 30♀; ANSP, USNM). *HAWAII*. Oahu: Honolulu [various dates (1943 and 1944), several planes] (3♂, 4♀; USNM). *KENYA*. "airplane," 17 Dec 1934, C. B. Symes (1♂; ANSP). *PHILIPPINES*. ["Clipper" from Midway], 22 Oct 1937 (1♀; ANSP). *UNITED STATES*. Florida: Miami [apparently from Baranquilla, Colombia] (1♀; USNM).

Distribution (locality marked with an asterisk is from the literature).—Afrotropical: Kenya, Madagascar. Australasian/Oceanian: Australia (QLD), Guam, Hawaiian Islands (Hawaii, Midway Island, Molokai, Oahu), *Northern Marianas. Neotropica: Belize, Colombia (possibly), Mexico (TAB), West Indies (Dominica, Jamaica, Tobago).



Figs. 21–25. Structures of the male genitalia of *Clasiopella austra*. 21, Epandrium, lateral view. 22, Surstylus, dorsolateral view. 23, Aedeagus and aedeagal apodeme, lateral view. 24, Hypandrium, ventral view. 25, Clasper, lateral view. Scale bar equals 0.1 mm.

Oriental: Philippines, Sri Lanka, Taiwan, Vietnam.

Natural history.—This species, although apparently originating in the Australasian/Oceanian and/or Oriental Region, is now widespread in the tropics, occurring in the African (first recorded by Cresson 1946b: 256, and reconfirmed here through the recent collecting efforts of A. Freidberg) and New World tropics (primarily in the Caribbean area). Cresson (1945, 1946a, 1946b) noted that the specimens he studied from Midway Island, the Caribbean, and Kenya were interceptions on airplanes, which is a further indication that this species was probably introduced to these areas.

Tenorio (1980: 286) found adults on vegetation along the margins of freshwater ponds, frequently in association with adults of *Psilopa girschneri* von Röder (as *P. olga*

Cresson). The specimens collected in Belize, however, were primarily from coastal marine habitats. The large series from Man of War Cay was found in two habitats. The first mostly consisted of damp leaf litter from red mangrove (*Rhizophora mangle* L.) that had accumulated just above the high-tide zone. The second habitat was a damp to wet peat/mud area that before drying was a small pool of brackish water. Along the margins of the pool were numerous pneumatophores of black mangrove (*Avicennia germinans* (L.) L.).

Remarks.—Externally this species is distinguished from *C. austra* by the mostly yellow legs (only the apical 1–2 tarsomeres are dark brown) and by the comparative difference in color and density of the microtomentum on the face versus that on the frons. The frons in this species is comparatively

thinly invested, and the microtomentum on the face gradually becomes denser, appearing more whitish. The structures of the male genitalia are also distinctive (see Figs. 14–20 and species description).

Clasiopella austra, NEW SPECIES
Figs. 21–25

Description.—As in description of *C. uncinata* except as follows: small to moderately small shore flies, length 1.95 to 2.4 mm; generally blackish brown.

Head: Frons and face densely and uniformly invested with gray to grayish brown microtomentum.

Thorax: Legs, except basal tarsomeres, entirely blackish brown; basal 3–4 tarsomeres yellow to brownish yellow, apical 1–2 tarsomeres brown. Costal vein ratio averaging 0.90; M vein ratio averaging 0.60.

Abdomen: Tergites black, shiny; 5th tergite of male with 2 small, oval tergites within broad, dorsomedial emargination. Male genitalia (Figs. 21–25): epandrial process (Fig. 21; at anteroventral angle) relatively short and straight; surstylus (Fig. 22) with cuticular microtrichiae; dorsal process of surstylus in lateral view much more broadly developed than ventral process, apex of dorsal process appearing blunt to concave, bearing numerous setulae in concavity; ventral surstylar process relatively short, thick, with sharply tapered apex; surstylus also with a median process, short, rounded, bearing apical setulae; aedeagus (Fig. 23) angularly curved, without lateral prongs, angulate at apical $\frac{1}{3}$, curved forward in lateral view, base with shallow lobe laterally; aedeagal apodeme (Fig. 23) triangular; clasper (Fig. 25) in lateral view with a long, narrow process, base of process very shallowly arched, apical $\frac{1}{3}$ – $\frac{1}{2}$ distinctly curved, bluntly rounded, bearing setulae along inner surface of curvature; base of clasper bearing 2 short setae, neither enlarged; gonite a simple sclerite, lacking a lobe that bears setulae; basal portion of hypandrium (Fig. 24) mod-

erately narrow, width greater than that of aedeagus.

Type material.—The holotype male is labeled “Australia, N.S.W. Careel Bay, Avalon (mangrove), 4 Jun. 1962, D. K. McAlpine [handwritten]/Aust. Mus. Collection. [red with black border]/HOLOTYPE *Clasiopella austra* ♂ W. N. Mathis [red; species name and gender handwritten].” The allotype female and seven paratypes (1♂, 6♀; AM, USNM) bear the same locality data as the holotype but with the same or other dates. Other paratypes are as follows: AUSTRALIA, New South Wales: Mactesville, 3 Dec 1961, D. K. McAlpine (1♂, 4♀; AM, USNM); Nelligen (tidal flat), 1 Feb 1973, D. H. Colless (1♂; ANIC). Northern Territory: Batten Point (30 im NE by E of Borroloola), 19 Apr 1976, D. H. Colless (1♀; ANIC). Queensland: Cairns, 19 Apr 1957, W. W. Wirth (1♂; USNM). The holotype is double mounted (glued to a paper point), is in good condition, and is deposited in the Australian Museum.

Etymology.—The species epithet, *austra*, refers to the distribution of this species in the southern hemisphere.

Remarks.—This species is easily distinguished from *C. uncinata* by the dark colored legs, especially the femora and tibiae, and by the uniform investment and color of the microtomentum on the face and frons. The structures of the male genitalia are also distinctive (see Figs. 21–25 and species description).

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